

# Annual Report



**Center for Forest Products Business**

*Alfred P. Sloan Foundation Industry Studies Center*

**Department of**



**College of Natural Resources and Environment**



Reporting Period July 1, 2020 - June 30, 2021



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September 2021



## Letter from Director:

*Hello from your Center,*

It has been 18 months since the pandemic hit us and changed our world forever. Often when I traveled in Asia I would see people wearing masks for what I thought was no reason. Today it is common place everywhere, and I no longer think about why. Somehow our industry has managed to do well during these unprecedented times. We saw record softwood prices and many hardwood species did very well this past year. The housing market continues to be very strong and is predicted to continue to grow. Exports are down and imports are down. We all are getting fatigued of various lockdowns and the daily reminder of how many people are sick, or what small business in our neighborhood had to close its doors due to Covid-19. Yet, the economy keeps plugging away behind all the masks. The positive side of this is businesses are finding new ways to satisfy customer needs which will help them in the future and new businesses are being created that will serve us better after this pandemic has passed.

Another year has passed and we welcomed 140+ students back in late August. Many of you have hired them for summer internships. When we visit with you, internships are one of the major factors' employers are looking for when they hire new permanent workers. Our job fairs have gone on-line in the spring and fall, so if you want to participate, please let me know. There is no substitute for good experiences in your mills or offices. We again thank you for helping our students gather this valuable experience.

Dr. Henry Quesada and I visited a number of your companies in August to see how we could better serve you and identify the issues we should be focusing on for our training of students. As you know, finding qualified employees is one of the largest issues our industry faces. That is why the Center was started in 1992 and have provided hundreds of students to you over the years. The comments for educational needs from the partners we visited included communication skills, team building, data analysis, positive attitude, personal initiative and technical knowledge. We attempt to include these skills in our classes, but I am the first to admit, it is difficult to change attitudes and work ethics of eighteen to twenty-year students. You will have to continue to reinforce these values regularly as you hire new employees.

I want to thank you for your continued support of our programs. I hope you will contact us with your needs for employees or summer interns. Many of our classes have projects and if you need a short specific project investigated, please contact me and I will see if we can work it into a class. Please feel free to contact me with any comments or suggestions to improve the program (rsmith4@vt.edu). Again, thanks for your support of our students and I wish you a successful year.

Sincerely,

*Bob Smith*

***“What lies behind us and what lies before us are tiny matters compared to what lies within us.”***

***Ralph Waldo Emerson***



### Participating Faculty and Staff

<b>Robert Smith</b>	<i>Director, Department Head and Professor</i>	<b>rsmith4@vt.edu</b>
<b>Henry Quesada</b>	<i>Assistant Director and Associate Professor</i>	<b>quesada@vt.edu</b>
Bob Bush	<i>Professor, Sustainable Biomaterials</i>	rbush@vt.edu
Tom Hammett	<i>Professor, Sustainable Biomaterials</i>	himal@vt.edu
Earl Kline	<i>Professor, Sustainable Biomaterials</i>	kline@vt.edu
Angela Riegel	<i>Program Specialist, Sustainable Biomaterials</i>	ariegel@vt.edu

### Mission

*To assist the forest products industry by improving the management of their operations and the marketing of their products.*



## Proposals Funded:

Chen, Z., M. White, J. Eisenback, and H. Quesada. USDA NIFA, Evaluating Vacuum and Steam Heat as A Methyl Bromide Alternate Phase Ii Control of Pinewood Nematode in Pine And Oak Wilt In White Oak Logs, \$491,725, 2019-2021.

Quesada, H. USDA Forest Service, Increasing hardwood utilization in the cross-laminated timber market, \$179,044, 2020-2022.

Quesada, H. USDA Forest Service, Part II of Expanding Markets for Thermally-modified Wood Products Produced from Low-value Hardwood Species, \$63,896, 2020-2023.

## Refereed Publications:

Quesada, H., R. Smith, J. Pomponi, and E. Arias. 2021. Factors Behind Construction Companies' Purchasing Decisions of Wood Products. *Forest Products Journal*.

Arias, E., H. Quesada, and R. Smith. 2020. Competitive Strategies for International Marketing of Hardwood Products Based on the Mining of Open Questionnaire Data. *BIORESOURCES*, 15(4), 7872-7892. doi:[10.15376/biores.15.4.7872-7892](https://doi.org/10.15376/biores.15.4.7872-7892).

Quesada, H., J. Mazzola, and D. Sherrard. 2020. Implementing Experiential Learning in High School Agriculture and Forestry Curriculum: A Case Study in Guatemala. *Journal of Experiential Education*, 43(4), 381-397. doi:[10.1177/1053825920926195](https://doi.org/10.1177/1053825920926195).

Adhakari, S., B. Bond, and H. Quesada, and A. L. Hammett. 2020. Potential of Hardwood Lumber in Cross Laminated Timber in North America: A CLT Manufacturer's Perspective. *Mass Timber Construction Journal*.

Quesada, H., R. Smith, J. Loferski, and G. Berger, G. 2020. A Visual Assessment of Cross-laminated timber Structures in Austria. BioProducts Business. *Bioproducts Business*, 5(5), 51-62. Retrieved from <https://biobus.swst.org/index.php/bpbj/article/view/85>.

## Trade Journal Publications Refereed:

Quesada, H. 2020. Market Assessment of Thermally-modified Wood: Part II. VA Loggers Association. Newsletter. September.

Quesada, H., and Brindley, C. 2020. Can lean manufacturing work in a post COVID-19 World? *Pallet Enterprise*, (September).



## Extension Publications:

Quesada, H. Quarterly newsletter for the Virginia Logger Association

Editorial in SBIO extension newsletter

## Other Publications:

Quesada, H. Editorial in Wood Products Community of Practice (Internet publication)

Quesada, H. Editorial in Center for Forest Products Business (CFPB) webpage

Quesada, H. Editorial in Sustainable Innovation Management (SIM) web page

Quesada, H. Editorial in Editorial board of Tec Empresarial (Journal article)

Quesada, H., and J. Ignosh, J. (2020). *Procesamiento de la Madera. Guías Técnicas-Didácticas Modulares para Docentes, Marco Didáctico y Operativo, Módulos de Formación de la Carrera de Perito Forestal.: E. Raute, S. Gonçalves, D. Walsh, M. Garcia, H. Quesada, J. Ignosh, D. Sherrard, J. Mazzola, E. Moreno, M. Reynosa, S. España, J. Robles, D. Monterroso. R. Bosque de León, E. Sánchez, M. Flores, R. Cruz, S. Calito, C. Herrera, K. Rizzo. Millennium Challenge Corporation – Guatemala Threshold Program, Formación para el Trabajo, Familia Ocupacional Cultivo y Aprovechamiento Agropecuario y Forestal, Escuela Nacional Central de Agricultura – Guatemala..*

Tasdemir, C., R. Gazo, R., and H. Quesada. 2020. Sustainability benchmarking tool (SBT): theoretical and conceptual model proposition of a composite framework. *ENVIRONMENT DEVELOPMENT AND SUSTAINABILITY*, 22(7), 6755-6797. doi:[10.1007/s10668-019-00512-3](https://doi.org/10.1007/s10668-019-00512-3)

Quesada, H. 2020. Implementation of Virginia Forest Products industries as a web application using MySQL, PHP and JQuery (Version 2.0) [Computer Software]. Center for Forest Products at Virginia Tech. Retrieved from <https://www.apps.cfpb.vt.edu/vadof/>

## Presentations:



Quesada, H., B. Bond, and J. Gonzalez. 2020. Barriers and Drivers of Thermally-modified Wood: Perceptions of Architects in the U.S. In *2020 International Society of Wood Science and Technology Annual Conference*. Virtual Conference.

Quesada, H. 2020. Technical Assessment of Thermally-modified Wood: Part I. VA Loggers Association. Newsletter. June.

Quesada, H., B. Bond, and S. Adhikari. June 16, 2021. A log yield study to measure the economic feasibility of structural grade hardwood lumber. In *Forest Products Society Annual Convention*. Online.

Smith, R. L. and Andreja Kutnar. 2021. An Exploratory Evaluation of Higher Education Needs in Wood Science in Europe. Presented at the SWST annual conference in Flagstaff, AZ.

### Short Courses & Continuing Education:

Date	Course name	# of Students	Description
April 26-30, 2021	Marketing Forest Products taught by Dr. Robert Smith and Dr. Omar Espinoza	28	Marketing Forest Products. For the Northeastern Marketing and Utilization Committee of State and Private Foresters. On line.

### Courses Taught:

SBIO 3464 Forest Products Business  
Semester: Spring 2021  
Credit Hours: 3  
Instructor(s): Henry Quesada  
No of students: 24

SBIO 5004 Seminar  
Semester: Spring 2021  
Credit Hours: 1  
Instructor(s): Bob Smith  
No. of students: 6

SBIO 5614 Forest Products Marketing and Management  
Semester: Fall 2020  
Credit Hours: 3  
Instructor(s): Bob Smith and Henry Quesada  
No. of students: 3



## Members

### **Appalachian Hardwood Manufacturers, Inc.**

PO Box 427, High Point, NC 27261

**Phone:** (336) 885-8315; **Fax:** (336) 886-8865

**Email:** [tom@appalachianwood.org](mailto:tom@appalachianwood.org); **Website:** [www.appalachianwood.org](http://www.appalachianwood.org)

**Contact:** Tom Inman, President

AHMI is an association that promotes logs, lumber and products from the Appalachian region.

### **Atlanta Hardwood Corporation**

5596 Riverview Road, Mableton, GA 30126-2914

**Phone:** (404) 792-2290; **Fax:** (404) 792-2294

**Email:** [ahc@hardwoodweb.com](mailto:ahc@hardwoodweb.com); **Website:** [www.hardwoodweb.com](http://www.hardwoodweb.com)

**Contacts:** James W. Howard, Jr., President; Marty Payny, Sales Manager; and Patrick G. Altham, VP Export

**Products:** boards, common; boards, select; flooring; moulding

**Species:** alder, ash, basswood, beech, cherry, hickory, imported hardwoods, mahogany, hard maple, soft maple, white maple, red oak, white oak, poplar, walnut, eastern white pine

### **Baillie Lumber Company**

PO Box 6, Hamburg, NY 14075

**Phone:** (716) 649-2850; **Fax:** (716) 649-2811

**Email:** [information@ballie.com](mailto:information@ballie.com); **Website:** [www.baillie.com](http://www.baillie.com)

**Contacts:** Jeff Meyer, President; Kenneth A. Philbrick, Yard Operations Manager

**Products:** boards, common; boards, select

**Species:** ash, basswood, beech, birch, cherry, red elm, hickory, hard maple, soft maple, red oak, white oak, poplar, walnut





**Bingaman & Son Lumber, Inc.**

PO Box 247, Kreamer, PA 17833

**Phone:** (570) 374-1108; **Fax:** (570) 374-5342

**Email:** [cbingaman@bingamanlumber.com](mailto:cbingaman@bingamanlumber.com); **Website:** [www.bingamanlumber.com](http://www.bingamanlumber.com)

**Contacts:** Chris Bingaman, Vice President Operations/Sales Manager

**Products:** boards, common; boards select; glued-up stock; furniture dimension

**Species:** ash, basswood, birch, cherry, hickory, mahogany, hard maple, soft maple, red oak, white oak, poplar, black walnut, eastern white pine

**Boehm-Madisen Lumber Co., Inc.**

PO Box 906, Brookfield, WI 53008-0906

**Phone:** (262) 544-4660; **Fax:** (262) 544-0795

**Email:** [boehmmad@execpc.com](mailto:boehmmad@execpc.com)

**Contacts:** Thomas J. Kestly, Sr.

**Products:** boards, common; boards, select; flooring; timbers; cutstock; log cabin siding; glued-up stock; pattern stock; decking, laminated; decking, roof; dimension, furniture; dimension, precut; edge-glued products;

**Danzer Group**

Danzer Veneer Americas, PO Box 3455, Williamsport, PA 17701

**Phone:** (570) 322-4400; **Fax:** (570) 322-7213

**Email:** [vijay\\_reddy@danzervenveer.com](mailto:vijay_reddy@danzervenveer.com); **Website:** [www.danzervenveer.com](http://www.danzervenveer.com)

**Contact:** Dr. Vijay Reddy, Vice President, (724) 827-8366 Darlington, PA.

**Products:** veneers for panel, furniture, door, cabinet, edge-banding and flooring, dimension, dry; cutstock; glued-up stock; moulding; fingerjoint stock; furniture dimension; window & sash stock

**Species:** white ash, aspen, basswood, birch, cherry, black cypress, hickory, hard maple, poplar, red oak, soft maple, white maple, white oak, walnut ash



**Fitzpatrick & Weller, Inc.**

PO Box 490, Ellicottville, NY 14731-0490

**Phone:** (716) 699-2393; **Fax:** (716) 699-2893

**Email:** [sales@fitzweller.com](mailto:sales@fitzweller.com); **Website:** [www.fitzweller.com](http://www.fitzweller.com)

**Contacts:** Dana Fitzpatrick, Executive Vice President

**Products:** boards, common; boards, select; dimension, dry; glued-up stock; moulding; dimension, furniture

**Species:** ash, white ash, basswood, beech, birch, cherry, hickory, maple, hard maple, soft maple, white maple, red oak, white oak, poplar, hemlock, eastern white pine

**Frank Miller Lumber Company, Inc.**

1690 Frank Miller Road, Union City, IN 47390

**Phone:** (765)-964-3196; **Fax:**(765)-964-6618

**Email:** [clea@frankmiller.com](mailto:clea@frankmiller.com); **Website:** [www.frankmiller.com](http://www.frankmiller.com)

**Contacts:** Martha Miller Mathias – President, CEO, COB

**Products:** boards, common; boards, select; dimension, green, quarter rift lumber

**Species:** white ash, basswood, beech, cherry, elm, hackberry, hard maple, soft maple, white maple, red oak, white oak, yellow poplar, black walnut

**Hardwood Manufacturers Association**

665 Rodi Road, Suite 305, Pittsburgh, PA 15235

**Phone:** (412) 244-0440; **Fax:** (412) 244-9090

**Website:** [info@hardwood.org](mailto:info@hardwood.org)

**Contacts:** Linda Jovanovich

HMA is an association that assists the furniture, flooring, kitchen and bath, and moulding and woodwork industries with hardwood information.



### **Hardwood Market Report**

PO Box 2633, Memphis, TN 38088-2633

**Phone:** (901) 767-9126; **Fax:** (901) 767-7534

**Email:** [hmr@hmr.com](mailto:hmr@hmr.com); **Website:** [www.hmr.com](http://www.hmr.com)

**Contact:** Judd Johnson, Editor

Hardwood Market Report, established in 1922, is a weekly publication giving benchmark pricing information and marketing commentary on North American hardwood lumber and the hardwood products industry.

### **Industrial Timber & Lumber Company**

23925 Commerce Park, Beachwood, OH 44122

**Phone:** (216) 831-3140; **Fax:** (216) 831-4734

**Email:** [sales@itlcorp.com](mailto:sales@itlcorp.com); **Website:** <http://www.itlcorp.com>

**Contacts:** Larry Evans, President

### **ISK Biocides, IBC manufacturing**

416 E. Brooks Road, Memphis, TN 38109-0158

**Phone:** (901) 344 5350; **Fax:** (901) 344 5387

**Email:** [info@ibio.com](mailto:info@ibio.com)

**Contact:** Joe Ignatoski, President , COO; Lance Johnson, District Sales Supervisor

**Products:** sap stain and mold preventatives; industrial wood preservatives; WOODguard and Natural Home--wood protection for the homeowner.

### **Jim C. Hamer Company**

PO Box 418, Kenova, WV 25530

**Phone:** (304) 453-6381; **Fax:** (304) 453-6587

**Email:** [jdearing@jimchamer.com](mailto:jdearing@jimchamer.com); **Website:** [www.jimchamer.com](http://www.jimchamer.com)

**Contacts:** Steve Hamer, President

**Products:** boards, common; boards, select; dimension, furniture

**Species:** ash, beech, hard maple, soft maple, red oak, white oak, poplar



**Spartanburg Forest Products, Inc.**

1431 Highway 101 South, Greer, SC 29651

**Phone:** (864) 699-3100; **Fax:** (864) 699-3101

**Email:** [smichael@gsonline.net](mailto:smichael@gsonline.net); **Website:** [www.sfpinc.biz](http://www.sfpinc.biz)

**Contact:** Stephan W. Michael, President/CEO

Spartanburg Forest Products, Inc. is a marketing and management organization, focusing in treated and engineered wood products.

**T & S Hardwoods, Inc.**

Harrisburg Road, PO Box 1233, Milledgeville, GA 31059

**Phone:** (478) 453-3492; **Fax:** (478) 453-9002

**Email:** [dsmith@tshardwoods.com](mailto:dsmith@tshardwoods.com); **Website:** [www.tshardwoods.com](http://www.tshardwoods.com)

**Contacts:** Larry N. Thompson III., President

**Products:** boards, common; boards, select; dimension, green; railroad ties; timbers

**Species:** brown ash, cherry, cottonwood, soft elm, sap gum, hickory, soft maple, red oak, white oak, pecan, yellow poplar, sycamore, black walnut, cedar, cypress

**USDA Forest Service**

Northern Research Station, 180 Canfield St., Morgantown, WV 26505

**Phone:** (304) 285 – 1500

**Contact:** Ed Cesa, Research Scientist

**USDA Forest Service**

Southern Research Station, 1650 Research Center Dr., Blacksburg, VA

**Phone:** (540) 231 – 5341

**Contact:** Phil Araman, Senior Research Scientist



**Virginia Forest Products Association**

220 East Williamsburg, PO Box 160, Sandston, VA 23150-0160

**Phone:** (804) 737-5625; **Fax:** (804) 737-9437

**Email:** [vfpa@att.net](mailto:vfpa@att.net); **Website:** [www.vfpa.net](http://www.vfpa.net)

**Contact:** Lesley Moseley

VFPA is an association active in promoting state and local codes and regulations developed to provide safety to life and property from the hazards of fire.

**W. M. Cramer Lumber Company**

PO Box 2888, Hickory, NC 28603

**Phone:** (828) 397-7481; **Fax:** (828) 397-3763

**Email:** [wmc@cramerlumber.com](mailto:wmc@cramerlumber.com); **Website:** [www.cramerlumber.com](http://www.cramerlumber.com)

**Contact:** Wendell Cramer, President

**Products:** boards, common; boards, select

**Species:** poplar, red oak, white oak, ash, hickory, beech, soft maple, cherry, hard maple, elm, basswood, chestnut, mahogany, white pine, ponderosa pine

**Wood Preservers, Inc.**

PO Box 158, Warsaw, VA 22572

**Phone:** (804) 333-4022; **Fax:** (804) 333-9269

**Email:** [mwright@woodpreservers.com](mailto:mwright@woodpreservers.com); **Website:** [www.woodpreservers.com](http://www.woodpreservers.com)

**Contact:** Morgan Wright, President

**Products:** boards; softwood dimension; timbers; ties

**Species:** loblolly pine, longleaf pine, shortleaf pine